Dry Bean

Curly Top

*Howard F. Schwartz, David H. Gent, Gary D. Franc and Robert M. Harveson*

**Identification and Life Cycle**

Curly top is caused by *Beet curly top virus* (BCTV). The disease cycle of the virus is inseparably linked to its vector, the sugar beet leafhopper. The vector prefers hot, desert environments, and consequently curly top is most severe in desert production regions. Seed and mechanical transmission are not known to occur. New infections depend on the movement of leafhoppers, which may overwinter on Russian thistle, mustards, and other weed species. The virus has a broad host range. Dry winter and spring weather conditions encourage early leafhopper migration to cultivated fields as overwintering vegetation matures.

**Plant Response and Damage**

*Beet curly top virus* infection causes a downward curling or cupping of leaves that become greatly distorted and puckered. Primary leaves of infected plants will be thicker and more brittle than those of non-infected plants. Leaves become yellowed; the plant is stunted and even killed. Symptoms from mid-season infection by curly top are similar to those of bean yellow mosaic virus (BYMV). With curly top, younger leaves are the most curled and cupped; whereas with BYMV infection, older leaves are most affected. Yield losses from BCTV are more severe when infection occurs early in the growing season.

**Management Approaches**

**Biological Control**

No biological control strategies have been developed for curly top.

**Cultural Control**

Plant certified seed of curly top resistant varieties in areas where BCTV is a problem.
Chemical Control

Chemical control of the beet leafhopper is rarely effective in individual fields.

Categories: Dry Bean, Disease, Curly Top

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